12-2004

The 2004 Iowa Corn Yield Test Report, District 7

Kendall R. Lamkey
Iowa State University

W.H. Vinson
Iowa State University

C.J. Turnbull
Iowa State University

The 2004 Iowa Corn Yield Test Report, District 7

Abstract

Results of the Iowa Crop Performance Test-Corn are published to aid Iowa farmers in selecting corn hybrids. This is the 85th consecutive year for the test. These data are first released on the Iowa Crop Improvement Association's homepage at http://www.agron.iastate.edu/icia/ usually around the end of November.

Disciplines

Agriculture

Visit the Iowa Crop Improvement Association online at http://www.agron.iastate.edu/icia/

A supplement to the December 11, 2004, issue of *Iowa Farmer Today*

2004 Iowa Crop Performance Test—Corn District 7

Results of the Iowa Crop Performance Test—Corn are published to aid Iowa farmers in selecting corn hybrids. This is the 85th consecutive year for the test.

These data are first released on the Iowa Crop Improvement Association's homepage at http://www.agron.iastate.edu/icia/ usually around the end of November.

The next released format of these data is in the Iowa Crop Management Database program. A description of this program and an order form can be found at http://extension.agron.iastate.edu/CMD/. A short description of how this program manages these data is provided in the "Other Reports" section of this report.

The final format is the printed version, which is printed and distributed by *Iowa Farmer Today* in its Dec. 11, 2004 issue. A few days later, the printed reports also are available from county extension offices.

The presentation of data for the hybrids tested does not imply approval or endorsement by the authors or the agencies sponsoring or conducting the test. Entries in Tables 1, 1A, and 2 are designated by brand name and variety.

Use of These Data in Advertisements

Iowa State University and the Iowa Crop Improvement Association desire to maintain the credibility of data from the Iowa Crop Performance Test—Corn. Misuse of these data in advertisements can have a negative effect on the perception of the value of these data. For advertising purposes, brand-to-brand comparisons should not be made unless more than one competitor brand is used in the ad and all entries of competitor brands in a reported table are included in the ad. Advertisement statements by an individual company about the performance of its entries can be made as long as they are accurate statements about the data as published with no reference to other companies' hybrids. A statement similar to: "See the official *Iowa Crop Performance Test—Corn* report, PM 660 (1–7) 04, for details," should be included in the ad.

2004 Procedure

Producers of seed corn and Iowa State University were eligible to enter hybrids in the Iowa Crop Performance Test—Corn. Each producer was allowed a maximum of 12 paid entries per district. All commercial entries had to be available in a quantity of at least 10 bushels of seed.

Iowa Crop Improvement Association

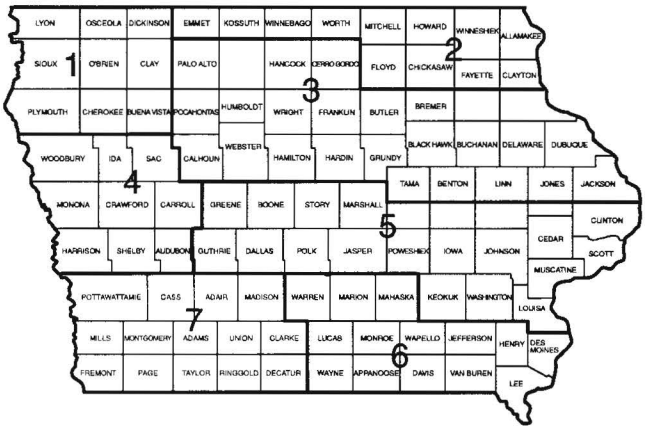
In 2004, data are reported on 121 entries in this district. Ten of the entries determined to be check hybrids were entered by the Iowa Crop Improvement Association. Survey cards were mailed to a random sample of corn growers in Iowa. Based on the survey results, the 10 hybrids grown on the most acres in the district were classified as check hybrids for the district. The check hybrids ($ and !) in this report were determined by the 2003 survey. The Iowa Crop Improvement Association entered a maximum of three check hybrids of any given brand. These entries were given priority over the remaining 111 entries made by seed producers.

Each entry was replicated four times in four-row plots at a planting rate of 30,000 kernels per acre at each location. All locations were machine planted. The center two rows of each plot were harvested with a corn combine. No gleanings or dropped ears were included in yield data. A moisture determination was made from each plot and yields were corrected to 15.5 percent moisture for shelled corn.

Since 1988, data for protein, oil, and starch percentages have been included in the *Iowa Crop Performance Test—Corn* reports. Protein, oil, and starch were measured on an Infratec 1225 near-infrared transmittance analyzer calibrated against accepted chemical methods as done by Woodson-Tenant Labs, Des Moines, Iowa. Dr. Charles R. Hurburgh, Jr. of the ISU Department of Agricultural and Biosystems Engineering was responsible for analyzing the samples. Samples for nutrient analysis were collected from one field in each district. Data presented are averages of the four replicated plots in that field. To be consistent with the yield data, the protein, oil, and starch data were corrected to 15.5 percent moisture.

How Information Is Presented

The agronomic data presented are averages of three locations in 2002, 2003, and 2004. Yield in bushels per acre and percentages of moisture, root lodging, stalk lodging, dropped ears, stand, protein, oil, and starch are shown for all entries in 2004 and for those tested in 2002 and 2003 that were in the 2004 test.



IOWA STATE UNIVERSITY
University Extension

PM 660 7 04 December 2004

Interpretation of Results

Yield differences due to variation in soil, fertility, moisture availability, insect infestation, and diseases, plus any variation due to planting and harvesting techniques, are identified through statistical analysis. The LSD values for yield shown in Tables 1, 1A, and 2 represent, in bushels per acre, the amount of yield variation that could be due to variations in the factors just mentioned. In comparing varieties, yield differences greater than the LSD value can be attributed to genetic differences in the yield potential of these varieties; yield differences less than the LSD value are not statistically different and could have been due to other factors.

Grain moistures shown in Tables 1, 1A, and 2 are indications of maturity and natural drying rate. Maturity of varieties entered generally ranged from short to full season. Yield comparisons should be made among varieties of similar maturity.

It is important to select varieties having stable performance over a range of environmental conditions. High yields for two or more consecutive years, Table 2, indicate stable performance. Also, starting in 2002, to increase the range of environmental conditions reported on in one year, 18 additional tables are provided electronically on the Iowa Crop Improvement Web page that merge data across districts. These tables double, and in some cases even triple, the number of locations reported on for hybrids entered in several districts. Supplemental yield and agronomic information about specific varieties may be obtained from seed corn dealers, crop consultants, and from neighbors who have grown these varieties.

The protein, oil, and starch percentage data (Tables 1, 1A, and 2) are quality traits important to different end-users of corn. For feed, protein is of primary interest; for wet-mill processing (ethanol and sweeteners), oil and starch content are important. Several firms have begun testing these characteristics on a routine basis. There are now more than 50 Iowa grain elevators with this testing capability.

Whole-grain near-infrared equipment measures composition of unground corn kernels in 1 to 1.5 minutes per sample. The equipment measures moisture simultaneously with composition. Using these instruments, country elevators can test and segregate grain as it is received. Obviously, all compositional factors cannot be high in the same hybrid. The grain market is expanding the production and marketing of certain hybrids for specific uses. This is an important change from the generic commodity approach widely used now.

The economic impact of compositional factors can be significant. Corn protein trades off with other protein sources in many feed rations. At $200 per ton for 44 percent protein soybean meal, the value of a 1 percent increase (e.g., from 8 percent to 9 percent) in corn protein is about 12 cents per bushel of corn. Likewise, an additional percent of oil yields about 10 to 14 cents per bushel in increased oil output in a wet processing plant or when substituted for white grease in feed rations. The additional ethanol or sweetener from an extra percent of starch provides 8 to 10 cents per bushel more revenue. Producers feeding livestock are in the best position to capture immediate benefits from these composition data. Country elevators with feed mills also have the ability to capitalize on increased protein in corn. The Iowa Corn Growers Association has prepared a publication to aid growers in using the nutrient data in the *Iowa Crop Performance Test—Corn* reports: *Nutrient Content and Feeding Value of Iowa Corn*, Iowa Corn Growers Association, Des Moines, Iowa 50265.

Hybrids with similar yields and agronomic characteristics may not be identical in corn composition. Therefore, feed costs can be reduced by selecting higher protein hybrids from a group with similar yield potential. Weather and soil conditions affect composition, but the relative ranking of hybrids does not change greatly. A higher protein hybrid will be higher than average regardless of environmental conditions that raise or lower the averages. The protein percentages reported are measures of crude protein and may not give an accurate indication of feed value if feed rations are balanced on individual amino acids rather than crude protein content.

2004 Field Data

The District 7 test was planted on farms operated by Robert Hays near Malvern in Mills County, Marvin Fuller near Corning in Adams County, and Marvin Eivins near Winterset in Madison County. At the Winterset location only 3 reps of data are reported on due to standing water in parts of the field. Field data are presented in Table A.

Table A. Field Data

	Hays Farm* Monona silt loam			Fuller Farm Macksburg silty clay loam			Eivins Farm Sharksburg silty clay loam		
Fertilizer applied, lb.	N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
Plowdown	151	—	—	—	—	—	11	52	40
Preplant	—	—	—	140	30	30	130	—	—
Total	151	—	—	140	30	30	141	52	40
2003 crop	Soybeans			Soybeans			Soybeans		
Row width	30 inches			30 inches			30 inches		
Planting date	April 16			May 3			April 19 & 23		
Harvest date	Sept. 28			Oct. 14			Oct. 25		
Average yield	214 bu/a			201 bu/a			219 bu/a		

*Field sampled for protein, oil, and starch percentage data.

Other Reports

Separate reports are available for each district shown in Figure 1. A limited supply of these publications is available at your county extension office or from Extension Distribution Center, 119 Printing and Publications Building, Iowa State University, Ames, Iowa 50011. Also, these data are available along with a hybrid selection program as a part of the Iowa Crop Management Database program. Along with all of the information as it appears in these written reports, the section of the Iowa Crop Management Database program that uses these data allows farmers to insert their own drying and shrink costs, expected price of corn, and final moisture percentage after drying. Using these specific criteria, the program calculates an adjusted economic value for each hybrid in the test. Farmers can then determine which hybrids might best fit their own production practices and provide the most profit. The computer program also can sort the hybrids by yield, moisture, adjusted value, root lodging, stalk lodging, dropped ears, protein, oil, starch, or brand and then print the data as sorted. It will also allow the user to tag selected hybrids and then list those selected hybrids as a new table for ease of viewing. A Pentium 1 computer or higher running Windows 95 or newer with a CD ROM drive and 30 megabytes of hard disk space are required to run the program. The cost of the program is a onetime purchase of $100. Future years' data can be downloaded from the Web at no charge. If the user cannot access the Web to download the new data, the price will be $25 for all seven districts' data. Order forms and a description of the program are available from Agribusiness Education Programs, telephone 515-294-6429 and on the Web at http://extension.agron.iastate.edu/CMD/.

The *2004 Iowa Crop Performance Test—Corn:*
PM 660 1 04 District 1
PM 660 2 04 District 2
PM 660 3 04 District 3
PM 660 4 04 District 4
PM 660 5 04 District 5
PM 660 6 04 District 6
PM 660 7 04 District 7

File: Agronomy 2-2

Prepared by Kendall R. Lamkey, W. H. Vinson, and C. J. Turnbull. Pioneer distinguished chair in maize breeding, technician, and graduate student.

Cooperating Organizations
Iowa Crop Improvement Association
Agriculture & Home Economics Experiment Station
Iowa State University Extension
Iowa Corn Promotion Board
U.S. Department of Agriculture

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Stanley R. Johnson, director, Cooperative Extension Service, Iowa State University of Science and Technology, Ames, Iowa.

Table 1A. 25 Top Yielding Hybrids Sorted by Harvest Moisture—District 7. 30,000 Planting Rate. LSD for 2004 Yield in Bushels is 10, for 2003 is 10, and for 2002 is 11. 2004 Protein Pct LSD = 0.2. 2004 Oil Pct LSD = 0.2. 2004 Starch Pct LSD = 0.3.

			Yield Bu/A			Moisture Pct			Root Ldg Pct			Stalk Ldg Pct			Drop Ear Pct			Stand Pct			Protein Pct			Oil Pct			Starch Pct				
Brand	>Variety	Notes	2002	2003	2004	2004	2003	2002	2004	2003	2002	2004	2003	2002	2004	2003	2002	2004	2003	2002	2004	2003	2002	2004	2003	2002	2004	2003	2002	>Variety	Brand
Ag Com	>112C	I		158	221	16.8	18.2		23	17		0	4		0	0		95	83		6.7	7.7		3.3	3.3		61.3	61.2		>112C	Ag Com
Access Seed	>A1011RR	GI			219	16.8			22			1			0			92			7.3			3.7			60.6			>A1011RR	Access Seed
Asgrow	>RX752RR/YG	GI		154	223	17.3	18.4		24	20		0	2		0	0		98	95		6.9	7.9		3.6	3.5		60.8	60.6		>RX752RR/YG	Asgrow
DEKALB	>DKC61-45RRYG	GI			220	17.5			12			1			0			96			7.8			3.5			60.1			>DKC61-45RRYG	DEKALB
KSC/Challenger	>5514YGCB	GI			219	17.7			28			1			0			95			7.7			3.8			60.0			>5514YGCB	KSC/Challenger
Kruger	>5815YGCB	GI			221	17.8			12			1			0			93			6.6			3.6			60.9			>5815YGCB	Kruger
Merschman	>M313A-1	GI			219	17.8			31			1			0			98			6.5			3.7			60.8			>M313A-1	Merschman
Premium	>P268				221	18.0			13			1			0			92			7.8			3.4			60.3			>P268	Premium
KSC/Challenger	>8414YGCB	GI			222	18.1			10			1			0			97			7.1			3.6			60.7			>8414YGCB	KSC/Challenger
Ag Source	>7783	GI			219	18.4			20			2			0			93			6.7			3.5			61.0			>7783	Ag Source
Four Star	>58148t	G			225	18.5			20			2			0			93			6.9			3.7			60.7			>581481	Four Star
Kruger	>5518YGCB	GI			226	18.6			14			1			0			95			7.8			3.6			60.2			>5518YGCB	Kruger
HighCycle by Font.	>HC7831YGCB	GI			218	18.6			28			0			0			98			6.8			3.6			60.7			>HC7831YGCB	HighCycle by Font.
Kruger	>5218YGCB	GI			223	18.8			22			1			0			81			7.0			3.5			60.7			>5218YGCB	Kruger
Access Seed	>A8414HX	GI			221	18.8			38			1			0			81			7.2			3.6			60.5			>A8414HX	Access Seed
Merschman	>M512C-1	GI			219	19.3			23			1			0			93			7.3			3.8			60.3			>M512C-1	Merschman
Kruger	>5416YGCB	GI			222	19.3			29			0			0			93			7.2			3.7			60.4			>5416YGCB	Kruger
Merschman	>M514A-6	GI			219	19.4			16			1			0			88			7.0			3.7			60.6			>M514A-6	Merschman
Middlekoop	>4415	I			221	19.4			23			0			0			91			6.7			3.7			60.8			>4415	Middlekoop
Garst	>8282YG1	G			225	19.5			9			1			0			87			7.8			3.3			60.4			>8282YG1	Garst
Access Seed	>A5516YGCB	GI			221	19.7			13			3			0			95			8.1			3.7			59.7			>A5516YGCB	Access Seed
Pfister	>3356Bt	GI		155	222	19.8	20.8		19	12		0	6		0	0		86	86		7.0	7.5		3.7	3.6		60.4	61.0		>3356Bt	Pfister
NK Brand	>N76-H2	GI			224	19.9			27			0			0			93			6.7			3.6			60.9			>N76-H2	NK Brand
Merschman	>M314A-3	GI			220	20.1			19			0			0			90			7.1			3.6			60.5			>M314A-3	Merschman
Merschman	>M314A-1	GI		156	223	20.2	20.7		30	13		0	8		0	0		96	83		6.9	7.3		3.8	3.6		60.6	61.2		>M314A-1	Merschman
Thompson/NuTech	>4616YGCB	GI			219	20.3			22			0			0			91			7.0			3.7			60.5			>4616YGCB	Thompson/NuTech
Average of All Entries			173.2	156.1	211.3	17.7	18.6	16.5	22.6	16.8	24.4	0.9	3.0	0.8	0.0	0.1	0.1	91.8	93.3	94.6	7.2	7.9	8.3	3.6	3.5	3.8	60.6	60.8	60.0	Average of All Entries	
Average of All Check Hybrids			174.9	160.2	206.9	16.8	18.3	16.6	23.7	16.9	24.2	1.2	2.7	0.9	0.0	0.1	0.1	92.1	93.8	95.1	7.4	8.3	8.4	3.6	3.6	3.7	60.4	60.4	60.0	Average of All Check Hybrids	

G = Transgenic Hybrid. I = Use of Insecticide Seed Treatment.
$ = Check Hybrid Entered by the Iowa Crop Improvement Association.
! = Short Check Hybrid Grown in Short Blocks.
= Hybrid Entered as a Short Hybrid and Grown in Short Blocks.
> = One of the Top 25 Yielding Hybrids.

Table 1. Average Performance of Varieties Tested in District 7. 30,000 Planting Rate. LSD for 2004 Yield in Bushels is 10, for 2003 is 10, and for 2002 is 11. 2004 Protein Pct LSD = 0.2. 2004 Oil Pct LSD = 0.2. 2004 Starch Pct LSD = 0.3.

			Yield Bu/A			Moisture Pct			Root Ldg Pct			Stalk Ldg Pct			Drop Ear Pct			Stand Pct			Protein Pct			Oil Pct			Starch Pct				
Brand	>Variety	Notes	2002	2003	2004	2004	2003	2002	2004	2003	2002	2004	2003	2002	2004	2003	2002	2004	2003	2002	2004	2003	2002	2004	2003	2002	2004	2003	2002	>Variety	Brand
$DEKALB	DKC53-34RRYG	GI			184	14.6			18			0			0			95			7.5			3.4			60.6			DKC53-34RRYG	$DEKALB
$DEKALB	DKC58-78YGCB	GI	173	158	202	14.8	16.5	14.7	14	15	10	3	1	0	0	0	0	94	93	87	7.8	8.5	8.5	3.6	3.8	3.9	60.9	60.0	58.6	DKC58-78YGCB	$DEKALB
$Asgrow	RX601YG	GI			186	15.3			35			2			0			92			7.2			3.6			60.7			RX601YG	$Asgrow
KSC/Challenger	412	I			208	15.3			19			2			0			92			7.8			3.5			60.6			412	KSC/Challenger
Ag Source	6166	GI			201	15.3			26			2			0			93			6.8			3.6			60.9			6166	Ag Source
Kruger	5512YGCB	GI			201	15.4			21			1			0			86			7.8			3.4			60.8			5512YGCB	Kruger
Rainbow	3128YGCB	G		156	203	15.6	16.5		32	22		1	2		0	0		92	94		7.8	8.0		3.6	3.6		60.6	60.6		3128YGCB	Rainbow
Kruger	2512RR/YGCB	GI			203	15.5			38			1			0			94			6.9			3.5			60.7			2512RR/YGCB	Kruger
Thompson/NuTech	EX713YGCB	GI			200	15.5			22			3			0			92			7.1			3.5			60.8			EX713YGCB	Thompson/NuTech
Access Seed	A2012RR/YGCB	GI			214	15.7			27			1			0			85			7.8			3.5			60.9			A2012RR/YGCB	Access Seed
Wilson	1566Bt	GI		160	207	15.7	16.6		22	12		1	2		0	0		86	93		6.8	7.9		3.6	3.5		60.6	60.9		1566Bt	Wilson
Pfister	2656Bt	GI			207	15.7			32			1			0			94			6.7			3.7			60.9			2656Bt	Pfister
Renze	8363YGCB/RR	GI		157	213	15.7	16.4		22	18		1	4		0	0		92	93		6.7	7.9		3.7	3.5		60.7	60.7		8363YGCB/RR	Renze
Channel Bio Corp	7808RRBt	GI			196	15.8			32			1			0			89			6.9			3.6			60.9			7808RRBt	Channel Bio Corp
M/W Genetics	G7718Bt	GI		156	210	15.8	17.6		18	25		1	2		0	0		91	94		6.8	7.8		3.5	3.5		61.0	60.8		G7718Bt	M/W Genetics
Merschman	M310A-3	GI		148	212	15.9	17.2		30	18		2	1		0	0		95	92		6.7	7.9		3.7	3.5		60.7	60.8		M310A-3	Merschman
Jacobsen	JS4637CB	GI			209	16.0			28			1			0			92			6.9			3.5			60.7			JS4637CB	Jacobsen
NK Brand	N67-W5	GI			214	16.2			20			0			0			94			7.3			3.5			60.8			N67-W5	NK Brand
SOI	113YGCB	GI			181	16.2			23			1			0			87			8.1			3.8			59.7			113YGCB	SOI
Ag Source	6883	GI		182	206	16.4	18.7		20	18		2	1		0	0		83	94		6.7	7.8		3.4	3.4		61.2	61.1		6883	Ag Source
DEKALB	DKC60-19RRYG	GI	180	180	212	16.4	16.9	16.5	14	10	19	1	1	0	0	0	0	92	95	93	6.7	7.3	7.4	3.4	3.3	3.6	61.3	61.4	60.8	DKC60-19RRYG	DEKALB
$Pioneer	34B24	GI	182	155	211	16.6	17.9	16.5	24	22	23	1	2	1	0	0	0	92	93	96	7.8	8.6	8.1	3.5	3.5	3.5	60.0	60.3	60.5	34B24	$Pioneer
Hawkeye Hybrid	3158Bt	G			205	16.6			17			1			0			91			6.7			3.4			61.3			3158Bt	Hawkeye Hybrid
Stine	9720YGCB	GI			201	16.6			24			1			0			92			7.8			3.5			60.8			9720YGCB	Stine
M/W Genetics	G8125Bt	GI		156	208	16.6	18.4		27	16		1	1		0	0		90	92		6.8	7.8		3.3	3.3		61.3	61.1		G8125Bt	M/W Genetics
Lewis	5113YGCB	GI			197	16.8			38			0			0			92			7.7			3.7			60.1			5113YGCB	Lewis
Ag Com	>112C	I		158	221	16.8	18.2		23	17		0	4		0	0		95	83		6.7	7.7		3.3	3.3		61.3	61.2		>112C	Ag Com
Middlekoop	2214	I		152	202	16.7	17.6		13	12		1	2		0	0		81	92		7.3	8.1		3.6	3.5		60.5	60.6		2214	Middlekoop
Crows	5366Bt	GI		152	210	16.7	18.1		20	18		0	1		0	0		89	92		6.9	7.6		3.4	3.4		61.0	61.4		5366Bt	Crows
KSC/Challenger	9315YGCB	GI			206	16.7			32			1			0			89			7.3			3.3			60.6			9315YGCB	KSC/Challenger
Wilson	1785Bt	GI		141	210	16.7	18.7		24	10		1	1		0	0		86	95		7.2	8.2		3.3	3.2		60.8	61.1		1785Bt	Wilson
Stine	9722YGCB	GI			198	16.7			20			1			0			81			7.8			3.5			60.8			9722YGCB	Stine
Four Star	5758Bt	GI		152	216	16.8	18.9		32	14		1	2		0	0		82	94		6.8	7.8		3.4	3.3		61.2	61.1		5758Bt	Four Star
Kruger	9115YGCB	GI		154	206	16.8	18.8		27	18		2	1		0	0		95	92		6.9	8.0		3.3	3.5		61.1	61.0		9115YGCB	Kruger
Access Seed	>A1011RR	GI			219	16.8			22			1			0			92			7.3			3.7			60.6			>A1011RR	Access Seed
HighCycle by Font.	HC7951YGCB	GI		154	211	16.8	18.4		30	16		1	1		0	0		89	93		6.8	7.8		3.4	3.4		61.2	60.5		HC7951YGCB	HighCycle by Font.
Trisler	5257CB	GI		164	216	16.9	18.1		26	14		2	1		0	0		85	86		6.8	7.8		3.3	3.3		61.2	61.2		5257CB	Trisler
Lewis	4137	!	168	157	208	16.9	18.3	15.9	23	20	31	1	4	1	0	0	0	82	93	95	7.7	8.5	8.6	3.9	3.9	4.1	58.8	60.1	58.2	4137	Lewis
Thompson Seeds	4013YGCB	GI			204	16.9			11			1			0			93			7.7			4.0			59.7			4013YGCB	Thompson Seeds
Merschman	M20109	GI			198	17.0			21			0			0			87			8.0			3.7			59.9			M20109	Merschman
KSC/Challenger	5616YGCB	GI			201	17.0			25			1			0			91			7.1			3.5			60.9			5616YGCB	KSC/Challenger
Kruger	5715YGCB	GI			216	17.0			16			1			0			93			6.7			3.4			61.2			5715YGCB	Kruger
Renze	8454YGCB	GI		154	215	17.0	18.3		29	25		0	2		0	0		81	90		6.7	7.8		3.4	3.4		61.2	61.2		8454YGCB	Renze
Merschman	M311A-1	GI		158	208	17.1	18.2		40	33		1	3		0	0		93	92		7.7	8.6		3.9	4.1		59.5	58.8		M311A-1	Merschman
HighCycle by Font.	HC88430	GI			188	17.1			24			2			0			87			7.7			3.9			59.8			HC88430	HighCycle by Font.
Thompson/NuTech	NT4415AYGCB	GI			213	17.1			23			1			0			96			6.7			3.4			61.3			NT4415AYGCB	Thompson/NuTech
$Wilson	1674Bt	GI			211	17.2			39			1			0			95			6.8			3.6			60.8			1674Bt	$Wilson
Ag Com	110	I		152	204	17.2	18.2		28	30		2	2		0	0		94	94		7.6	8.5		3.9	4.0		60.0	60.1		110	Ag Com
Renze	9454YGCB/RR	GI		153	213	17.2	19.4		21	22		1	1		0	0		81	82		6.8	7.7		3.4	3.4		61.3	61.1		9454YGCB/RR	Renze
Thompson/NuTech	2414HX	GI			208	17.2			22			1			0			87			8.1			4.0			59.5			2414HX	Thompson/NuTech
Asgrow	>RX752RR/YG	GI		154	223	17.3	18.4		24	20		0	2		0	0		98	95		6.9	7.9		3.6	3.5		60.8	60.6		>RX752RR/YG	Asgrow
Rainbow	3100YGCB	G			207	17.3			27			1			0			88			7.0			3.5			60.7			3100YGCB	Rainbow
NK Brand	N70-T9	GI		156	205	17.3	18.5		24	21		1	1		0	0		93	96		6.9	7.7		3.8	3.7		60.7	60.9		N70-T9	NK Brand
Four Star	6573RRBt	GI		159	206	17.3	19.0		30	15		1	1		0	0		94	95		6.8	7.8		3.3	3.4		61.3	61.1		6573RRBt	Four Star
KSC/Challenger	8511	I			204	17.3			23			1			0			89			7.5			3.8			60.2			8511	KSC/Challenger
Mark	MRKEX8t114b	GI			210	17.4			47			1			0			87			7.6			3.7			60.0			MRKEX8t114b	Mark
$Pioneer	33B51	GI		168	210	17.4	20.0		15	16		1	2		0	0		82	95		7.3	8.1		3.6	3.5		60.4	60.6		33B51	$Pioneer
Access Seed	A8413HX	GI			209	17.4			19			3			0			91			8.0			3.9			58.6			A8413HX	Access Seed
DEKALB	>DKC61-45RRYG	GI			220	17.5			12			1			0			96			7.8			3.5			60.1			>DKC61-45RRYG	DEKALB
Ag Source	7223	G			212	17.5			19			1			0			92			8.0			4.0			59.5			7223	Ag Source
$DEKALB	DKC63-50YGCB	GI		156	216	17.5	17.1		26	8		0	7		0	0		94	96		6.8	7.6		3.5	3.5		60.7	60.8		DKC63-50YGCB	DEKALB
Renze	8375	I			210	17.5			10			0			0			84			7.4			3.6			60.6			8375	Renze
Renze	5425HX1	GI			207	17.5			28			1			0			81			8.8			3.9			58.6			5425HX1	Renze
Thompson/NuTech	4515YGCB	GI			218	17.6			22			0			0			93			6.6			3.6			60.9			4515YGCB	Thompson/NuTech
NK Brand	N70-F1	GI		155	212	17.6	19.2		44	23		0	1		0	0		92	94		7.3	8.4		3.6	3.5		60.3	60.5		N70-F1	NK Brand
DEKALB	DKC63-81RRYG	GI			216	17.6			21			0			0			95			7.7			3.8			59.9			DKC63-81RRYG	DEKALB
HighCycle by Font.	HC7871YGCB	GI		163	212	17.7	18.5		27	18		1	2		0	0		88	95		6.7	7.7		3.7	3.6		60.8	61.0		HC7871YGCB	HighCycle by Font.
Access Seed	A5415YGCB	GI			208	17.7			27			1			0			80			7.2			3.9			60.3			A5415YGCB	Access Seed
KSC/Challenger	>5514YGCB	GI			219	17.7			28			1			0			95			7.7			3.8			60.0			>5514YGCB	KSC/Challenger
Pfister	2750Bt	GI		162	216	17.7	18.9		34	12		1	2		0	0		92	92		6.4	7.5		3.6	3.6		61.1	60.9		2750Bt	Pfister
Lewis	5645YGCB	GI			210	17.8			32			1			0			95			7.0			3.6			60.6			5645YGCB	Lewis
Rainbow	X1103YGCB	G			209	17.8			34			0			0			91			6.7			3.7			60.8			X1103YGCB	Rainbow
Kruger	>5815YGCB	GI			221	17.8			12			1			0			93			6.6			3.6			60.9			>5815YGCB	Kruger
Merschman	>M313A-1	GI			219	17.8			31			1			0			98			6.5			3.7			60.8			>M313A-1	Merschman
$Pioneer	33P67	GI	189	169	218	18.0	19.8	18.1	25	14	24	1	2	1	0	0	0	92	95	93	7.6	8.5	8.4	3.7	3.5	3.8	60.1	60.5	60.0	33P67	$Pioneer
$Garst	8464IT		156	155	204	18.0	18.6	17.2	23	25	31	0	1	2	0	0	0	88	91	95	7.8	7.8	8.5	3.8	3.7	3.6	60.3	60.5	59.8	8464IT	$Garst
Premium	>P268				221	18.0			13			1			0			92			7.8			3.4			60.3			>P268	Premium
Thompson/NuTech	4213YGCB	GI			204	18.0			18			0			0			84			7.1			3.6			60.7			4213YGCB	Thompson/NuTech
Renze	8384YGCB	GI			216	18.1			12			0			0			86			7.2			3.3			61.1			8384YGCB	Renze
KSC/Challenger	>8414YGCB	GI			222	18.1			10			1			0			97			7.1			3.6			60.7			>8414YGCB	KSC/Challenger
KSC/Challenger	8513HX	GI			218	18.1			29			1			0			82			6.8			3.8			60.6			8513HX	KSC/Challenger
Kruger	5615YGCB	GI			214	18.1			10			1			0			93			7.1			3.6			60.7			5615YGCB	Kruger
Stine	9803YGCB	GI		154	215	18.2	17.9		18	15		0	4		0	0		94	92		6.9	7.5		3.5	3.4		61.1	61.4		9803YGCB	Stine
Thompson/NuTech	EX817YGCB	GI			214	18.2			17			2			0			92			7.7			3.6			60.6			EX817YGCB	Thompson/NuTech
Thompson/NuTech	EX115YGCB	GI			203	18.3			14			0			0			86			7.2			3.5			60.7			EX115YGCB	Thompson/NuTech
Ag Source	>7783	GI			219	18.4			20			2			0			93			6.7			3.5			61.0			>7783	Ag Source
Thompson/NuTech	EX817YGCB	GI			215	18.4			28			1			0			81			6.7			3.5			61.8			EX817YGCB	Thompson/NuTech
$Garst	8348				207	18.5			19			2			0			85			7.4			3.5			60.6			8348	Garst
Four Star	>58148t	G			225	18.5			20			2			0			93			6.9			3.7			60.7			>581481	Four Star
Kruger	>5518YGCB	GI			226	18.6			14			1			0			95			7.8			3.6			60.2			>5518YGCB	Kruger
HighCycle by Font.	>HC7831YGCB	GI			218	18.6			28			0			0			98			6.8			3.6			60.7			>HC7831YGCB	HighCycle by Font.
Kruger	>5218YGCB	GI			223	18.8			22			1			0			81			7.0			3.5			60.7			>5218YGCB	Kruger
Access Seed	>A8414HX	GI			221	18.8			38			1			0			81			7.2			3.6			60.5			>A8414HX	Access Seed
Merschman	>M512C-1	GI			219	19.3			23			1			0			93			7.3			3.8			60.3			>M512C-1	Merschman
Kruger	>5416YGCB	GI			222	19.3			29			0			0			93			7.2			3.7			60.4			>5416YGCB	Kruger
KSC/Challenger	9815YGCB	GI			212	19.3			2			1			0			95			7.7			3.5			60.4			9815YGCB	KSC/Challenger
Stine	8804YGCB	GI			208	19.4			26			4			0			84			7.4			3.7			60.4			8804YGCB	Stine
Kruger	8518HX	GI			212	19.4			0			0			0			91			8.1			3.7			59.7			8518HX	Kruger
Thompson/NuTech	EX715LL/Bt	GI			218	19.4			5			0			0			83			7.5			3.3			60.8			EX715LL/Bt	Thompson/NuTech
Merschman	>M514A-6	GI			219	19.4			16			1			0			88			7.0			3.7			60.6			>M514A-6	Merschman
Middlekoop	>4415	I			221	19.4			23			0			0			91			6.7			3.7			60.8			>4415	Middlekoop
Thompson/NuTech	EX317YGCB	GI			214	19.5			3			0			0			91			7.9			3.6			60.1			EX317YGCB	Thompson/NuTech
Garst	>8282YG1	G			225	19.5			9			1			0			87			7.8			3.3			60.4			>8282YG1	Garst
Kruger	5315YGCB	GI			211	19.6			26			2			0			82			8.1			3.7			58.7			5315YGCB	Kruger
Ag Com	1148	I		145	214	19.6	20.3		22	15		0	4		0	1		88	80		6.9	7.6		3.8	3.5		60.5	61.1		1148	Ag Com
Access Seed	>A5516YGCB	GI			221	19.7			13			3			0			95			8.1			3.7			59.7			>A5516YGCB	Access Seed
NK Brand	N75-C4	GI		164	209	19.7	20.8		4	0		0	7		0	0		81	92		7.5	8.5		3.4	3.2		60.7	60.9		N75-C4	NK Brand
Thompson/NuTech	EX315YGCB	GI			205	19.7			22			0			0			92			7.2			3.8			60.9			EX315YGCB	Thompson/NuTech
Lewis	7844YGCB	GI		158	216	19.7	20.5		24	11		1	8		0	0		83	95		6.9	7.5		3.8	3.6		60.4	60.9		7844YGCB	Lewis
Pfister	>3356Bt	GI		155	222	19.8	20.8		19	12		0	6		0	0		86	86		7.0	7.5		3.7	3.6		60.4	61.0		>3356Bt	Pfister
Trisler	5337CB	GI		153	217	19.8	20.7		20	12		0	9		0	0		81	91		7.0	7.4		3.7	3.5		60.5	61.2		5337CB	Trisler
KSC/Challenger	5517YGCB	GI			218	19.9			21			0			0			92			7.0			3.6			60.6			5517YGCB	KSC/Challenger
NK Brand	>N76-H2	GI			224	19.9			27			0			0			93			6.7			3.6			60.9			>N76-H2	NK Brand
Middlekoop	4414Bt	GI			217	20.1			35			5			0			93			7.5			3.5			60.6			4414Bt	Middlekoop
Merschman	>M314A-3	GI			220	20.1			19			0			0			90			7.1			3.6			60.5			>M314A-3	Merschman
Rainbow	3158YGCB	G		158	216	20.2	20.8		28	8		1	12		0	0		83	90		6.8	7.6		3.7	3.6		60.7	61.0		3158YGCB	Rainbow
Merschman	>M314A-1	GI		156	223	20.2	20.7		30	13		0	8		0	0		96	83		6.9	7.3		3.8	3.6		60.6	61.2		>M314A-1	Merschman
Thompson/NuTech	>4616YGCB	GI			219	20.3			22			0			0			91			7.0			3.7			60.5			>4616YGCB	Thompson/NuTech
Kruger	5517YGCB	GI			213	20.3			21			0			0			91			6.9			3.8			60.5			5517YGCB	Kruger
Mark	MRKRR04Bt115	GI			212	20.6			27			1			0			91			7.1			3.6			60.7			MRKRR04Bt115	Mark
Average of All Entries			173.2	156.1	211.3	17.7	18.6	16.5	22.6	16.8	24.4	0.9	3.0	0.8	0.0	0.1	0.1	91.8	93.3	94.6	7.2	7.9	8.3	3.6	3.5	3.8	60.6	60.8	60.0	Average of All Entries	
Average of Check Hybrids			174.9	160.2	206.9	16.8	18.3	16.6	23.7	16.9	24.2	1.2	2.7	0.9	0.0	0.1	0.1	92.1	93.8	95.1	7.4	8.3	8.4	3.6	3.6	3.7	60.4	60.4	60.0	Average of Check Hybrids	

G = Transgenic Hybrid. I = Use of Insecticide Seed Treatment.
$ = Check Hybrid Entered by the Iowa Crop Improvement Association.
! = Short Check Hybrid Grown in Short Blocks.
= Hybrid Entered as a Short Hybrid and Grown in Short Blocks.

With the quick development of new hybrids today, it is becoming more difficult for growers to view several years of data on each hybrid to help them decide which hybrids to select for planting the following year. The next best thing is to look at hybrids' performances across several locations in one year. So, data from additional location groupings along with the standard district groupings are provided on the Iowa Crop Improvement Association's Web page at http://www.agron.iastate.edu/icia/. These additional tables, summarizing data across districts, make it possible to look at hybrids' performances averaged across more locations than in the past to help predict which hybrids may have the best relative performance potential under next year's growing conditions. These 18 tables double or triple the number of locations reflected in each hybrid's performance data.

Table 2. Averages of 2003-04 (2-Year) and 2002-04 (3-Year) of Varieties Tested in District 7.
LSD for Yields Are 6 Bushels for 02-04 (3-Year) and 7 Bushels for 03-04 (2-Year).

3-Year Protein LSD = 0.2. 3-Year Oil LSD = 0.1. 3-Year Starch LSD = 0.2.
2-Year Protein LSD = 0.2. 2-Year Oil LSD = 0.1. 2-Year Starch LSD = 0.2.

			Yield bu/a		Moisture Pct		Root Ldg Pct		Stalk Ldg Pct		Drop Ear Pct		Stand Pct		Protein Pct		Oil Pct		Starch Pct			
Brand	Variety	Notes	3 Year	2 Year	2 Year	3 Year	3 Year	2 Year	3 Year	2 Year	3 Year	2 Year	3 Year	2 Year	3 Year	2 Year	3 Year	2 Year	3 Year	2 Year	Variety	Brand
$DEKALB	DKC58-78YGCB	GI	177	180	15.6	15.3	16	15	1	2	0	0	95	94	8.3	8.1	3.8	3.7	59.9	60.0	DKC58-78YGCB	$DEKALB
Rainbow	3120YGCB	G		179	16.0			27		1		0		93		7.5		3.6		60.6	3120YGCB	Rainbow
Renze	9363YGCB/RR	GI		185	16.1			20		2		0		93		7.3		3.6		60.7	9363YGCB/RR	Renze
Wilson	1566Bt	GI		183	16.1			17		1		0		90		7.3		3.5		60.9	1566Bt	Wilson
M/W Genetics	G7716Bt	GI		183	16.5			22		1		0		92		7.3		3.5		60.9	G7716Bt	M/W Genetics
Merschman	M310A-3	GI		180	16.6			24		1		0		94		7.3		3.6		60.8	M310A-3	Merschman
DEKALB	DKC60-19RRYG	GI	184	186	16.7	16.6	14	12	1	1	0	0	93	94	7.1	7.0	3.4	3.4	61.2	61.3	DKC60-19RRYG	DEKALB
$Pioneer	34B24	GI	183	183	17.2	17.0	23	23	1	2	0	0	94	93	8.2	8.2	3.5	3.5	60.3	60.1	34B24	$Pioneer
Middlekoop	2214	I		177	17.3			12		1		0		86		7.7		3.5		60.6	2214	Middlekoop
$DEKALB	DKC63-50YGCB	GI		186	17.3			17		4		0		95		7.2		3.5		60.7	DKC63-50YGCB	DEKALB
Crows	5366Bt	GI		181	17.4			19		1		0		91		7.3		3.4		61.2	5366Bt	Crows
Ag Corn	112C	I		189	17.4			20		2		0		94		7.2		3.3		61.2	112C	Ag Corn
M/W Genetics	G8125Bt	GI		183	17.5			21		1		0		91		7.3		3.3		61.2	G8125Bt	M/W Genetics
Ag Source	6883	GI		184	17.6			19		1		0		93		7.3		3.4		61.2	6883	Ag Source
HighCycle by Font.	HC7951YGCB	GI		182	17.6			23		1		0		91		7.3		3.4		61.1	HC7951YGCB	HighCycle by Font.
Merschman	M311A-1	GI		182	17.6			37		2		0		92		8.2		4.0		59.8	M311A-1	Merschman
Lewis	4137	I	174	181	17.6	17.0	25	22	2	3	0	0	93	93	8.4	8.1	4.0	3.9	59.7	59.9	4137	Lewis
Renze	8454YGCB	GI		184	17.7			27		1		0		91		7.3		3.4		61.2	8454YGCB	Renze
Ag Corn	110	I		178	17.7			29		2		0		94		8.0		4.0		60.0	110	Ag Corn
Wilson	1785Bt	GI		175	17.7			20		1		0		93		7.7		3.2		61.0	1785Bt	Wilson
Kruger	9115YGCB	GI		180	17.8			22		1		0		93		7.4		3.4		61.1	9115YGCB	Kruger
Asgrow	RX752RR/YG	GI		188	17.8			22		1		0		96		7.4		3.5		60.7	RX752RR/YG	Asgrow
Four Star	5758Bt	GI		184	17.8			23		2		0		93		7.4		3.3		61.2	5758Bt	Four Star
Trisler	5257CB	GI		190	18.0			20		1		0		95		7.3		3.3		61.2	5257CB	Trisler
Stine	9803YGCB	GI		185	18.1			16		2		0		93		7.2		3.4		61.2	9803YGCB	Stine
HighCycle by Font.	HC7971YGCB	GI		188	18.1			23		1		0		92		7.2		3.6		60.9	HC7971YGCB	HighCycle by Font.
Four Star	6573RRBt	GI		183	18.2			22		1		0		95		7.3		3.3		61.2	6573RRBt	Four Star
$Garst	8464IT		172	180	18.3	17.9	26	24	1	1	0	0	91	90	7.8	7.4	3.7	3.8	60.2	60.4	8464IT	$Garst
Renze	9454YGCB/RR	GI		183	18.3			22		1		0		91		7.3		3.4		61.2	9454YGCB/RR	Renze
Pfister	2750Bt	GI		189	18.3			23		1		0		92		7.0		3.6		61.0	2750Bt	Pfister
NK Brand	N70-F1	GI		184	18.4			33		1		0		93		7.9		3.6		60.4	N70-F1	NK Brand
NK Brand	N70-T9	GI		180	18.4			23		1		0		94		7.3		3.7		60.8	N70-T9	NK Brand
$Pioneer	33B51	GI		189	18.7			15		1		0		93		7.7		3.6		60.5	33B51	$Pioneer
$Pioneer	33P67	GI	192	194	18.9	18.6	21	20	2	2	0	0	93	93	8.2	8.0	3.7	3.6	60.2	60.3	33P67	$Pioneer
Ag Corn	114B	I		180	20.0			18		2		0		89		7.3		3.6		60.8	114B	Ag Corn
Lewis	7044YGCB	GI		187	20.1			17		4		0		94		7.2		3.7		60.7	7044YGCB	Lewis
NK Brand	N75-C4	GI		186	20.2			2		4		0		91		8.0		3.9		60.8	N75-C4	NK Brand
Trisler	5337CB	GI		185	20.2			16		5		0		91		7.2		3.6		60.9	5337CB	Trisler
Pfister	3356Bt	GI		189	20.3			16		3		0		96		7.3		3.6		60.7	3356Bt	Pfister
Merschman	M314A-1	GI		190	20.4			26		4		0		94		7.1		3.7		60.9	M314A-1	Merschman
Rainbow	3158YGCB	G		183	20.5			19		7		0		92		7.2		3.6		60.9	3158YGCB	Rainbow
Average of All Entries			180.3	183.9	18.0	17.1	20.9	20.7	1.3	1.9	0.1	0.0	93.4	92.7	8.0	7.5	3.7	3.5	60.2	60.8	Average of All Entries	
Average of Check Hybrids			181.0	185.1	17.7	17.2	21.6	19.0	1.3	1.9	0.1	0.0	93.4	93.1	8.1	7.9	3.7	3.6	60.1	60.3	Average of Check Hybrids	

G = Transgenic Hybrid. I = Use of Insecticide Seed Treatment.
$ = Check Hybrid Entered by the Iowa Crop Improvement Association.
! = Short Check Hybrid Grown in Short Blocks.
= Hybrid Entered as a Short Hybrid and Grown in Short Blocks.

District 7

Designations Identifying Brands in the Test

Access Seed	Access Seed, Dike, IA 50669 319 989 2531
Ag Com	Ag Com, Essex, IA 51638 712 379 3107
Ag Source	Ag Source Seeds, Nevada, IA 50201 515 382 8880, www.AgSourceseeds.com
*Asgrow	Monsanto, Cortland, IL 60112 815 754 4809, www.farmsource.com
Channel Bio Corp	Channel Bio Corp, Kentland, IN 47951 219 474 6868
Crows	Crows Hybrid Corn Co., Kentland, IN 53711 608 274 8215, www.crowshybrid.com
*DEKALB	Monsanto, Cortland, IL 60112 815 754 4809, www.monsanto.com
Four Star	Four Star Seed, Logan, IA 51546 712 644 1400, www.4Starseed.com
*Garst	Garst Seed, Robins, IA 52328 319 373 7458
Hawkeye Hybrid	Hawkeye Hybrids, Pella, IA 50219 641 628 3827
HighCycle by Font.	Fontanelle, Fontanelle, NE 68044-2505 402 721 1410, www.fontanelle.com
Jacobsen	Jacobsen Hybrid Corn Co., Lake View, IA 51450-0379 800 761 1024
Kruger	Kruger Seed Co., Dike, IA 50624 800 772 2721
KSC/Challenger	KSC/Challenger Seed, Dike, IA 50624 319 989 2414
Lewis	Lewis Hybrids, Ursa, IL 62376 217 964 2131, www.lewishybrids.com
M/W Genetics	Midwest Seed Genetics, Carroll, IA 51401 608 274 8215, www.midwestseed.com
Mark	Mark Seed Co., Perry, IA 50220 515 465 2122, www.markseed.com
Merschman	Merschman Seeds, West Point, IA 52656 319 837 6111 Ext 2311, www.merschmanseeds.com
Middlekoop	Middlekoop Seed Corn, Packwood, IA 52580 319 695 3266
NK Brand	Syngenta Seeds, Ames, IA 50010 515 239 3505, www.NK.com
Pfister	Pfister Hybrid Corn, El Paso, IL 61738 309 527 6000, www.pfisterhybrid.com
*Pioneer	Pioneer Hi-Bred Intl. Inc., Johnston, IA 50131 515 253 3889, www.pioneer.com
*Pioneer	Pioneer Hi-Bred Intl. Inc., Johnston, IA 50131-0454 515 253 3892, www.pioneer.com
Premium	Premium Seed, Berwick, IL 61417 309 462 2396
Rainbow	Rainbow Seeds, Oskaloosa, IA 52577 800 373 9401, www.rainbowseeds.com
Renze	Renze Hybrids, Carroll, IA 51401 712 669 3301, www.renzehybrids.com
SOI	Sand Seed Service, Inc., Marcus, IA 51035 712 376 4135, www.sandsofiowa.com
Stine	Stine Seed, Adel, IA 50003 800 362 2510, www.stineseed.com
Thompson Seeds	Thompson Seeds, Leland, IA 50453 641 567 3350
Thompson/NuTech	Thompson Seeds/NuTech, Ames, IA 50010 515 232 8236
Trisler	Trisler Seed Farms, Inc., Fairmount, IL 61841 217 288 9301, www.trisler.com
Trisler	Ag Com, Essex, IA 51638 712 379 3107
*Wilson	Wilson Seeds, Harlan, IA 51537 608 274 8215, www.wilsonseeds.com

*Companies with one or more check hybrids entered by the Iowa Crop Improvement Association.